

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Production process for parts by Reaction Injection Moulding, characterized in that it is performed a dynamic pressure measurement, for the determination of ~~the a~~ pulsation - both in frequency and in amplitude - to which ~~the a~~ mixing and reaction pulsation regime is subjected to, and subsequently is detected ~~the a~~ flow regime within the mixing and reaction chamber~~(1)~~.

wherein the performing the dynamic pressure measurement includes measuring the frequency of a pressure signal obtained from the dynamic pressure measurement, such that the frequency is a function of mixing dynamics.

2. (currently amended): Process according to claim 1, characterized in that the dynamic pressure measure is made upstream of the injectors~~(2, 3)~~.

3. (currently amended): Process according to claim 2, characterized in that the dynamic pressure measure is made using a differential pressure transducer~~(5)~~, with pressure taps located upstream of the injectors~~(2, 3)~~.

4. (withdrawn - currently amended): Production process for parts by Reaction Injection Moulding, characterized in that it is artificially introduced a pulsation, with given frequency and amplitude, imposed on the jets of the injectors ~~(2, 3)~~.

5. (withdrawn): Process according to claim 4, characterized in that the artificially introduced pulsation is of frequency multiple or sub-multiple of the natural frequency.

6. (currently amended): Process according to any of claims 1 to 3 and any of claims 4 to 5, characterized in that a pulsation is artificially introduced in the jets of the injectors ~~(2, 3)~~ and, ~~in that in those the~~ jets it is performed a measurement of the pulsation resulting ~~on~~ from the combination of the artificially introduced pulsation and the natural pulsation resulting directly from the mixing and reaction regime.

7. (original): Process according to claim 6, characterized in that the artificially introduced pulsation is automatically adjusted, in frequency and/or in amplitude, as a function of the dynamic pressure measurement.

8. (withdrawn - currently amended): Device for the production of parts by Reaction Injection Moulding, for the implementation of the process in claim 1, including a mixing and

reaction chamber (1) and at least two opposing injectors (2, 3), characterized in that it comprises a means (5) for performing the dynamic pressure measurement.

9. (withdrawn - currently amended): Device for the production of parts by Reaction Injection Moulding for the implementation of the process in claim 4, including a mixing and reaction chamber (1) and at least two opposing injectors (2, 3), characterized in that it comprises a means (6) for ~~the~~ an introduction of an artificial pulsation having a given frequency and amplitude imposed on the jets of the injectors (2, 3).

10. (withdrawn - currently amended): Device according to ~~claims 8 and 9~~ claim 9, characterized in that the means (6) for the introduction of an artificial pulsation, with ~~a~~ the given imposed frequency and amplitude, are affected by the results of the dynamic pressure measurement, ~~made~~ determined by a means (5) for performing the dynamic pressure measurement.

11. (withdrawn - currently amended): Device according to claims 8 to 10, characterized in that it comprises a prismatic rectangular mixing and reaction chamber (1) and rectangular opposing injectors (2, 3) extending through the whole width of the corresponding face of the prism, and in that the aperture, d_1 , of the injectors is regulated and/or fixed in order to equalize the opposing jets kinetic energy.

12. (withdrawn - currently amended): Device according to any of claims 8 to 10, characterized in that it comprises a cylindrical mixing and reaction chamber ~~(1)~~ and elongated opposing injectors ~~(2, 3)~~ with the same size d_2 normal to the axis of the chamber ~~(1)~~ and with aperture d_1 regulated and/or fixed in order to equalize the opposing jets kinetic energy.

13. (withdrawn - currently amended): Device according to any of claims 8 to 12, characterized in that one of the feed streams is injected by an additional injector ~~(4)~~ in the opposing jets impact region.

14. (withdrawn - currently amended): Device according to claim 13, characterized in that the additional injector ~~(4)~~ is substantially axial to the chamber ~~(1)~~.